

WHAT IS CLAIMED IS:

1. A method for managing network traffic comprising:
explicitly identifying a set of virtual local area network (VLAN) identifiers (IDs)
5 for use with a first service;
receiving traffic from a customer at a provider edge device (PE), wherein said PE
connects to other PEs via a tunnel-capable network;
classifying said traffic;
associating said traffic with said first service in response to said classification if
10 said traffic has a VLAN ID from the explicitly identified set of VLAN IDs; and
associating said traffic with a default service in response to said classification if
said traffic does not have a VLAN ID from the explicitly identified set of VLAN IDs.
2. The method of claim 1 wherein said traffic is classified at least in part based on a
15 VLAN ID that is associated with said traffic.
3. The method of claim 1 wherein said traffic is classified at least in part based on an
incoming port of said traffic.
- 20 4. The method of claim 1 wherein said traffic is classified at least in part based on an
incoming port of said traffic and the VLAN ID of said traffic.
5. The method of claim 1 wherein said tunnel-capable network is a multiprotocol
label switching (MPLS) network.
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6. The method of claim 5 further including encapsulating packets of said traffic with
a tunnel label and a virtual circuit (VC) label for transport across said MPLS network.

7. The method of claim 1 wherein said traffic is forwarded from said PE utilizing a virtual private LAN service (VPLS) over multiprotocol label switching (MPLS) technique that involves encapsulating packets of said traffic with a tunnel label and a VC label.

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8. The method of claim 1 wherein said default service is a virtual private LAN (VPL) service.

9. The method of claim 8 wherein said first service and said VPL service include
10 encapsulating Ethernet packets with a tunnel label and a VC label.

10. The method of claim 1 further including an initial step of assigning a range of VLAN IDs to said customer and wherein said set of VLAN IDs is explicitly identified from said assigned range of VLAN IDs.

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11. The method of claim 1 wherein associating said traffic with said first service includes identifying a layer 2 (L2) forwarding equivalency class (FEC) that is related to said first service and wherein associating said traffic with said default service includes identifying an L2 FEC class that is related to said default service.

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12. The method of claim 1 wherein explicitly identifying a set of VLAN IDs includes identifying a set of IEEE 802.1q VLAN IDs for use with said first service.

13. The method of claim 1 wherein said default service is a VPL service and said first
25 service is a non-VPL service.

14. A system for managing network traffic at a provider edge device (PE) comprising:
means for explicitly identifying a set of virtual local area network (VLAN)
identifiers (IDs) for use with a first service;
means for receiving traffic from a customer at said PE, wherein said PE connects
5 to other PEs via a tunnel-capable network;
means for classifying said received traffic; and
means for associating said traffic with said first service in response to said
classification if said traffic has a VLAN ID from the explicitly identified set of VLAN
IDs and for associating said traffic with a default service in response to said classification
10 if said traffic does not have a VLAN ID from the explicitly identified set of VLAN IDs.
15. The system of claim 14 wherein said classification means classifies said traffic at
least in part based on a VLAN ID that is associated with said packet.
- 15 16. The system of claim 14 wherein said classification means classifies said traffic at
least in part based on the port of entry of said traffic.
17. The system of claim 14 wherein said classification means classifies said traffic at
least in part based on the port of entry of said traffic and the VLAN ID of said traffic.
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18. The system of claim 14 wherein said tunnel-capable network is a multiprotocol
label switching (MPLS) network.
19. The system of claim 18 further including a virtual private LAN service (VPLS)
25 engine for encapsulating packets with a tunnel label and a VC label for transport across
said MPLS network.
20. The system of claim 14 further including a VPLS engine for forwarding said
traffic from said PE utilizing a VPLS over MPLS technique that involves encapsulating
30 packets with a tunnel label and a VC label.

21. The system of claim 14 wherein said associating means includes means for identifying an L2 forwarding equivalency class (FEC) that is related to said first service and for identifying an L2 FEC class that is related to said default service.
- 5 22. The system of claim 14 wherein said default service is a VPL service and said first service is a non-VPL service.
23. A method for managing network traffic comprising:
establishing a customer-specific virtual private local area network (VPL) through
10 a multiprotocol label switched (MPLS) domain;
explicitly identifying a set of virtual local area network (VLAN) identifiers (IDs) for use with non-VPL traffic;
receiving traffic from a customer at a provider edge device (PE), wherein said PE connects to other PEs via said MPLS domain;
15 examining said traffic to identify non-VPL traffic;
extracting identified non-VPL traffic from said customer-specific VPL; and
forwarding the non-extracted traffic within said customer-specific VPL.
24. The method of claim 23 wherein identifying a set of VLAN IDs includes
20 identifying a set of IEEE 802.1q VLAN IDs for use with non-VPL traffic.
25. The method of claim 23 wherein examining said traffic to identify non-VPL traffic includes determining whether said traffic is non-VPL traffic before determining whether said traffic is VPL traffic.
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26. The method of claim 25 further including an initial step of comparing the VLAN ID of said traffic to the identified set of non-VPL VLAN IDs.
27. The method of claim 26 further including identifying traffic, which has a VLAN
30 ID that does not match the identified set of non-VPL VLAN IDs, as VPL traffic.

28. The method of claim 23 further including configuring a layer 2 (L2) functional equivalency class (FEC) that maps said non-VPL traffic to a label switching path (LSP) that does not support said customer-specific VPL.

5 29. The method of claim 28 further including configuring an L2 FEC that maps said VPL traffic to an LSP that supports said customer-specific VPL.

30. The method of claim 23 further including assigning a VC label and a tunnel label to a VPL packet for transmission through said MPLS domain.

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31. The method of claim 23 wherein VLAN IDs have per-port significance.

32. A method for managing network traffic comprising:
establishing a customer-specific virtual private local area network (VPL) through
15 a multiprotocol label switched (MPLS) domain;
explicitly identifying a set of virtual local area network (VLAN) identifiers (IDs) for use with non-VPL traffic;
receiving traffic from a customer at a provider edge device (PE), wherein said PE connects to other PEs via said MPLS domain;
20 examining said received traffic to identify non-VPL traffic;
forwarding non-VPL traffic outside of said customer-specific VPL; and
forwarding the remaining traffic within said customer-specific VPL.